

TECHNICAL REVIEW AND EVALUATION OF THE CRUSHING AND SCREENING GENERAL PERMIT

I. INTRODUCTION

The Crushing and Screening General Permit is a permit for a facility class (Crushing and Screening Plants) that contains 10 or more facilities that are similar in nature, have substantially similar emissions, and would be subject to the same or substantially similar requirements. The General Permit will last for 5 years from the date of its issuance. Equipment that is covered under the general permit will be required to have an “Authorization To Operate” (ATO). The ATO will identify the piece of equipment by having the manufacture, date of manufacture, maximum capacity, and serial number and /or equipment number along with the hours of operation limitation depending on the equipment and the county it is operating in. This General Permit allows for portable Crushing and Screening Plants to move to other locations statewide. This general permit also allows the Permittee to co-locate a Concrete Batch plant with the Crushing and Screening Plant.

The Permittee that applies for an ATO under the general permit shall pay to the Department a flat permit processing fee of \$500 with the submittal of the permit application. The Permittee must also pay, for each calendar year, the applicable administrative or inspection fees as described in the Arizona Administrative Code Title 18, Chapter 2, Article 5, section 511 (A.A.C. R18-2-511).

Due the fact that this is a statewide general permit there is the potential that the Permittee may operate in a non-attainment areas in the state of Arizona. The non-attainment area are.

TABLE 1: NON-ATTAINMENT AREA SUMMARY AND CLASSIFICATION

SO ₂ Areas		PM ₁₀ Areas		CO Areas	
Ajo	Maintenance	Ajo	Moderate	Phoenix	Serious
Douglas	Non-Attainment	Bullhead City	Maintenance	Tucson	Maintenance
Hayden	Non-Attainment	Douglas	Moderate		
Miami	Non-Attainment	Hayden/Miami	Moderate	8 Hour Ozone Area	
Morenci	Maintenance	Nogales	Moderate	Phoenix	Basic
San Manuel	Non-Attainment	Paul Spur	Moderate		
		Payson	Maintenance		
		Phoenix	Serious		
		Rillito	Moderate		
		Yuma	Moderate		

II. FACILITY DESCRIPTION

A. Process Description

Crushing and Screening Plant

Rock and crushed stone products generally are loosened by drilling and blasting and then are loaded by power shovel or front-end loader into large haul trucks that transport the material to the processing operations. Techniques used for extraction vary with the nature and location of the deposit. Processing operations may include crushing, screening, size classification, material handling and storage operations. All of these processes can be significant sources of PM and PM₁₀ emissions if uncontrolled.

Quarried stone normally is delivered to the processing plant by truck and is dumped into a bin. A feeder or screens separate large boulders from finer rocks that do not require primary crushing, thus reducing the load to the primary crusher. Jaw, impactor, or gyratory crushers are usually used for initial reduction. The crusher product, normally 7.5 to 30 centimeters (3 to 12 inches) in diameter, and the grizzly throughs (undersize material) are discharged onto a belt conveyor and usually are conveyed to a surge pile for

temporary storage or are sold as coarse aggregates. The stone from the surge pile is conveyed to a vibrating inclined screen called the scalping screen. This unit separates oversized rock from the smaller stone. The undersized material from the scalping screen is considered to be a product stream and is transported to a storage pile and sold as base material. The stone that is too large to pass through the top deck of the scalping screen is processed in the secondary crusher. Cone crushers are commonly used for secondary crushing (although impact crushers are sometimes used), which typically reduces material to about 2.5 to 10 centimeters (1 to 4 inches). The material (throughs) from the second level of the screen bypasses the secondary crusher because it is sufficiently small for the last crushing step. The output from the secondary crusher and the throughs from the secondary screen are transported by conveyor to the tertiary circuit, which includes a sizing screen and a tertiary crusher.

Tertiary crushing is usually performed using cone crushers or other types of impactor crushers. Oversize material from the top deck of the sizing screen is fed to the tertiary crusher. The tertiary crusher output, which is typically about 0.50 to 2.5 centimeters (3/16th to 1 inch), is returned to the sizing screen. Various product streams with different size gradations are separated in the screening operation. The products are conveyed or trucked directly to finished product bins, to open area stock piles, or to other processing systems such as washing, air separators, and screens and classifiers (for the production of manufactured sand). Some stone crushing plants produce manufactured sand. This is a small-sized rock product with a maximum size of 0.50 centimeters (3/16th inch). Crushed stone from the tertiary sizing screen is sized in a vibrating inclined screen (fines screen) with relatively small mesh sizes. Oversized material is processed in a cone crusher or a hammermill (fines crusher) adjusted to produce small diameter material. The output is returned to the fines screen for resizing. In certain cases, stone washing is required to meet particulate end product specifications or demands.

Concrete Batch Plants

At most of these plants, sand, aggregate, cement and water are all gravity fed from the weigh hopper into the mixer trucks. The concrete is mixed on the way to the site where the concrete is to be poured. At some of these plants, the concrete may also be manufactured in a central mix drum and transferred to a transport truck. Most of the remaining concrete manufactured are products cast in a factory setting. Precast products range from concrete bricks and paving stones to bridge girders, structural components, and panels for cladding. Concrete masonry, another type of manufactured concrete, may be best known for its conventional 8 x 8 x 16-inch block. In a few cases, concrete is dry batched or prepared at a building construction site. The raw materials can be delivered to a plant by rail, truck or barge. The cement is transferred to elevated storage silos pneumatically or by bucket elevator. The sand and coarse aggregate are transferred to elevated bins by front end loader, clam shell crane, belt conveyor, or bucket elevator. From these elevated bins, the constituents are fed by gravity or screw conveyor to weigh hoppers, which combine the proper amounts of each material.

B. Air Pollution Control Equipment

Crushing and Screening Plants

Emissions of PM, PM₁₀, and PM_{2.5} occur from a number of operations in stone quarrying and processing. A substantial portion of these emissions consists of heavy particles that may settle out within the plant. As in other operations, crushed stone emission sources may be categorized as either process sources or fugitive dust sources. Process sources include those for which emissions are amenable to capture and subsequent control. Fugitive dust sources generally involve the re-entrainment of settled dust by wind or machine movement. Emissions from process sources should be considered fugitive unless the sources are vented to a baghouse or are contained in an enclosure with a forced-air vent or stack. Factors affecting emissions from either source category include the stone size distribution and the surface moisture content of the stone processed, the process throughput rate, the type of equipment and operating practices used, and topographical and climatic factors. Of graphical and seasonal factors, the primary variables affecting uncontrolled PM emissions are wind and material moisture content. Wind parameters vary with geographical location, season, and weather. It can be expected that the level of emissions from unenclosed

sources (principally fugitive dust sources) will be greater during periods of high winds. The material moisture content also varies with geographical location, season, and weather. Therefore, the levels of uncontrolled emissions from both process emission sources and fugitive dust sources generally will be greater in arid regions of the country than in temperate ones and greater during the summer months because of a higher evaporation rate.

The moisture content of the material processed can have a substantial effect on emissions. This effect is evident throughout the processing operations. Surface wetness causes fine particles to agglomerate on or to adhere to the faces of larger stones, with a resulting dust suppression effect. However, as new fine particles are created by crushing and attrition and as the moisture content is reduced by evaporation, this suppressive effect diminishes and may disappear. Plants that use wet suppression systems (spray nozzles) to maintain relatively high material moisture contents can effectively control PM emissions throughout the process. Depending on the geographical and climatic conditions, the moisture content of mined rock can range from nearly zero to several percent. Because moisture content is usually expressed on a basis of overall weight percent, the actual moisture amount per unit area will vary with the size of the rock being handled. On a constant mass-fraction basis, the per-unit area moisture content varies inversely with the diameter of the rock. The suppressive effect of the moisture depends on both the absolute mass water content and the size of the rock product. Typically, wet material contains >1.5 percent water.

Concrete Batch Plants

Particulate matter, consisting primarily of cement and pozzolan dust but including some aggregate and sand dust emissions, is the primary pollutant of concern. In addition, there are emissions of metals that are associated with this particulate matter. All but one of the emission points are fugitive in nature. The only point sources are the transfer of cement and pozzolan material to silos, and these are usually vented to a fabric filter or "sock". Fugitive sources include the transfer of sand and aggregate, truck loading, mixer loading, vehicle traffic, and wind erosion from sand and aggregate storage piles. The amount of fugitive emissions generated during the transfer of sand and aggregate depends primarily on the surface moisture content of these materials. The extent of fugitive emission control varies widely from plant to plant.

Types of controls used may include water sprays, enclosures, hoods, curtains, shrouds, movable and telescoping chutes, and the like. A major source of potential emissions, the movement of heavy trucks over unpaved or dusty surfaces in and around the plant, can be controlled by good maintenance and wetting of the road surface.

III. APPLICABLE REGULATIONS

The Department has identified the applicable regulations that apply to each unit at a Crushing and Screening Facility. Table 2 below summarizes the findings of the Department with respect to the regulations that are applicable to each emissions unit. Previous permit conditions are discussed under Section VI of this technical review document.

Table 2: Applicable Regulations Statwide excluding Maricopa, Pima, and Pinal County

Unit ID	Applicability date	Control Equipment	Applicable Regulations	Verification
Crushing and Screening Plants (NSPS)	After August 31, 1983	Wet Scrubbers, Spray Bars, wet suppressant, and enclosures.	40 CFR 60.670(a) 40 CFR 60.670(c) 40 CFR 60.670(e) 40 CFR 60.670(f) 40 CFR 60.672(a) 40 CFR 60.672(b) 40 CFR 60.672(c) 40 CFR 60.672(d) 40 CFR 60.672(e) 40 CFR 60.672(f) 40 CFR 60.672(g) 40 CFR 60.672(h) 40 CFR 60.674(a) 40 CFR 60.674(b) 40 CFR 60.675(a) 40 CFR 60.675(b) 40 CFR 60.675(c) 40 CFR 60.675(d) 40 CFR 60.675(e) 40 CFR 60.675(f) 40 CFR 60.675(g) 40 CFR 60.675(h) 40 CFR 60.675(i) 40 CFR 60.676(a) 40 CFR 60.676(c) 40 CFR 60.676(d) 40 CFR 60.676(f) 40 CFR 60.676(g) 40 CFR 60.676(h) 40 CFR 60.676(i)	New Source Performance Standards Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants. Affected facilities include crushers, grinding mill, screening operation, bucket elevators, belt conveyors, bagging operations, storage bins, and enclosed truck or railcar loading stations.
Crushing and Screening Plants (Non-NSPS)	Before August 31, 1983	Wet Scrubbers, Spray Bars, wet suppressant, and enclosures	A.A.C. R18-2-722.A A.A.C. R18-2-722.B A.A.C. R18-2-722.C A.A.C. R18-2-722.D A.A.C. R18-2-722.E A.A.C. R18-2-722.F A.A.C. R18-2-722.G	Standards of Performance for Existing or Crushed Stone Processing Plants.

Unit ID	Applicability date	Control Equipment	Applicable Regulations	Verification
Internal Combustion Engines	Not Applicable	None	A.A.C. R18-2-719.B A.A.C. R18-2-719.C.1 A.A.C R18-2-719.E A.A.C R18-2-719.F A.A.C R18-2-719.H A.A.C R18-2-719.I A.A.C R18-2-719.J	Standards of Performance for Existing Stationary Rotating Machinery.
Concrete Batch Plants	Not Applicable	Baghouses and wet suppressants	A.A.C. R18-2-702.B.1 A.A.C. R18-2-702.B.2 A.A.C. R18-2-702.B.3 A.A.C. R18-2-723	The conditions stated here are the opacity limitations.
Fugitive Dust	Not Applicable	Control Measures	<u>A.A.C.</u> A.A.C. R18-2-602 A.A.C. R18-2-604.A A.A.C. R18-2-604.B A.A.C. R18-2-605.A A.A.C. R18-2-605.B A.A.C. R18-2-606 A.A.C. R18-2-607.A A.A.C. R18-2-607.B A.A.C. R18-2-612 A.A.C. R18-2-804.B	Emissions from Fugitive Dust Sources.
Mobile Sources	Not Applicable	None	A.A.C. R18-2-801 A.A.C. R18-2-802 A.A.C. R18-2-804.A A.A.C. R18-2-801.B	Emissions from Mobile Source

Table 3: Applicable Regulations for Maricopa

Unit ID	Start-up date	Control Equipment	Applicable Regulations	Verification
Facility Wide Requirements	Not Applicable	None	<p>Maricopa County Rule 100 §200.63.a.3.c</p> <p>Maricopa County Rule 220 §302.5</p> <p>Maricopa County Rule 300 §301 Maricopa County Rule 300 §502</p> <p>Maricopa County Rule 310</p> <p>Maricopa County Rule 320 §300 Maricopa County Rule 300 §302 Maricopa County Rule 300 §303</p> <p>Maricopa County Rule 316 §305.1.a Maricopa County Rule 316 §305.1.b Maricopa County Rule 316 §305.1.c Maricopa County Rule 316 §305.2 Maricopa County Rule 316 §305.3 Maricopa County Rule 316 §501.1 Maricopa County Rule 316 §501.2.c Maricopa County Rule 316 §501.3 Maricopa County Rule 316 §501.4 Maricopa County Rule 316 §502.1 Maricopa County Rule 316 §502.2</p>	<p>General Provisions and Definitions</p> <p>Non-Title V Permit Provisions</p> <p>Visible Emissions</p> <p>Fugitive Dust</p> <p>Odors And Gaseous Air Contaminants</p> <p>Nonmetallic Mineral Processing</p>
Crushing and Screening Operation	Not Applicable	Wet Scrubbers, Spray Bars, wet suppressants, and enclosures	<p>Maricopa County Rule 316 §301.1.a Maricopa County Rule 316 §301.1.b Maricopa County Rule 316 §301.1.c Maricopa County Rule 316 §301.1.d Maricopa County Rule 316 §301.2 Maricopa County Rule 316 §501.2.a</p>	Nonmetallic Mineral Processing located in Maricopa County

Unit ID	Start-up date	Control Equipment	Applicable Regulations	Verification
Internal Combustion Engines	Not Applicable	None	Maricopa County Rule 324 §208 Maricopa County Rule 324 §215 Maricopa County Rule 324 §104.2 Maricopa County Rule 324 §104.2 Maricopa County Rule 324 §302.1 Maricopa County Rule 324 §302.2 Maricopa County Rule 324 §302.3 Maricopa County Rule 324 §302.4 Maricopa County Rule 324 §302.5 Maricopa County Rule 324 §302.6 Maricopa County Rule 324 §302.7 Maricopa County Rule 324 §303 Maricopa County Rule 324 §304 Table 1 Maricopa County Rule 324 §304 Table 2 Maricopa County Rule 324 §304 Table 3 Maricopa County Rule 324 §304 Table 4 Maricopa County Rule 324 §305 Maricopa County Rule 324 §306 Maricopa County Rule 324 §500 Maricopa County Rule 324 §501 Maricopa County Rule 324 §502.1 Maricopa County Rule 324 §502.3 Maricopa County Rule 324 §502.4 Maricopa County Rule 324 §503	Stationary Rotating Machinery subject to State rules located in Maricopa County.
Concrete Batch Plant Requirements		Spray Bars, wet suppressants, baghouses and enclosures	Maricopa County Rule 316 §303.1.a Maricopa County Rule 316 §303.1.b Maricopa County Rule 316 §303.1.c Maricopa County Rule 316 §303.2.a Maricopa County Rule 316 §303.2.b Maricopa County Rule 316 §303.2.c Maricopa County Rule 316 §303.2.d Maricopa County Rule 316 §303.2.e Maricopa County Rule 316 §501.2.b	The regulations listed are applicable to Concrete Batch Plants located in Maricopa County.

Unit ID	Start-up date	Control Equipment	Applicable Regulations	Verification
Fugitive Dust	Not Applicable	Water trucks, and wet suppressants	Maricopa County Rule 316 §306.1 Maricopa County Rule 316 §306.2 Maricopa County Rule 316 §306.3.a Maricopa County Rule 316 §306.3.b Maricopa County Rule 316 §306.3.c Maricopa County Rule 316 §306.4 Maricopa County Rule 316 §306.5.a Maricopa County Rule 316 §306.5.b Maricopa County Rule 316 §307 Maricopa County Rule 316 §307.1 Maricopa County Rule 316 §307.1.a Maricopa County Rule 316 §307.1.b Maricopa County Rule 316 §307.1.c Maricopa County Rule 316 §307.1.d Maricopa County Rule 316 §307.2 Maricopa County Rule 316 §307.3.a Maricopa County Rule 316 §307.3.b Maricopa County Rule 316 §307.4.a Maricopa County Rule 316 §307.4.b Maricopa County Rule 316 §307.4.c Maricopa County Rule 316 §307.5.a Maricopa County Rule 316 §307.5.b Maricopa County Rule 316 §307.5.c Maricopa County Rule 316 §307.6.a Maricopa County Rule 316 §307.6.b Maricopa County Rule 316 §307.6.c Maricopa County Rule 316 §307.6.d Maricopa County Rule 316 §307.6.e Maricopa County Rule 316 §307.7 Maricopa County Rule 316 §307.8 Maricopa County Rule 316 §307.9 Maricopa County Rule 316 §308 Maricopa County Rule 316 §309 Maricopa County Rule 316 §503 Maricopa County Rule 316 §504	The regulations listed are applicable to fugitive dust sources located in Maricopa County

Table 8. Regulations for Pima and Pinal Counties

Unit ID	Start-up date	Control Equipment	Applicable Regulations	Verification
Crushing and Screening Plants in Pima	Not Applicable	Spray Bars	P.C.C. §§17.16.010.C P.C.C. §§17.16.040 P.C.C. §§17.16.050 P.C.C. §§17.16.060 P.C.C. §§17.16.070 P.C.C. §§17.16.080 P.C.C. §§17.16.090 P.C.C. §§17.16.100 P.C.C. §§17.16.110 P.C.C. §§17.16.370.A P.C.C. §§17.16.370.B.1 P.C.C. §§17.16.370.B.2 P.C.C. §§17.16.370.C P.C.C. §§17.16.370.D P.C.C. §§17.16.370.E P.C.C. §§17.16.370.F P.C.C. §§17.16.370.G P.C.C. §§17.16.380	The regulations listed are applicable to Crushing and Screening Plants located in Pima County.
Crushing and Screening Plants in Pinal	Not Applicable	Spray Bars	Pinal Code §5-5-180 Pinal Code §5-5-190.A Pinal Code §5-5-190.C Pinal Code §5-5-190.D Pinal Code §5-5-200.A Pinal Code §5-5-200.B	The regulations listed are applicable to Crushing and Screening Plants located in Pinal County.

IV. PREVIOUS PERMITS AND CONDITIONS

A. Previous Permits

Table 4 below lists the previous Crushing and Screening General Permits

Table 4: Previous Permits

Date Permit Issued	Permit #	Application Basis
05/20/1996	-	Crushing and Screening General Permit issued
8/24/2000	-	Crushing and Screening General Permit Renewal
11/24/2004	-	Crushing and Screening General Permit Reopening

B. Previous Permit Conditions

The following are discussions on the previous General Permit.

Crushing and Screening General Permit

This permit was issued on 08/24/2000 to operate a Crushing and Screening Facility

Crushing and Screening General Permit, References	Determination				Comments
	Revise	Keep	Delete	Stream-line	
Introduction	X				The initial introduction includes language describing the equipment that requires an ATO and qualifying parameters for getting a general permit for crushing and screening plants. The new introduction will discuss the option of allowing co-location of concrete batch plants and fugitive emissions.
Att. A.	X				General provisions - revised to represent most recent language
Attachment "B" I.A			X		This condition states that this document is a general permit for Crushing and Screening Plants. This condition is redundant and has been removed.
Attachment "B" I.B			X		This condition states the authority for the Department to issue a general permit. This is identified in Attachment "A" and therefore is being removed.
Attachment "B" I.C.	X				This conditions states that the general permit covers portable crushing and screening plants that are subject to the NSPS or state regulations and That Class I sources are not covered. This has been moved to the introduction of this permit and revised because this permit allows for concrete batch plants to be co-located with crushing and screening plants

Crushing and Screening General Permit, References	Determination				Comments
	Revise	Keep	Delete	Stream-line	
Attachment "B" I.D	X				This condition identified the equipment that would get an ATO under this general permit. This condition was also moved to the introduction of the permit.
Attachment "B" I.E.	X				This condition stipulated that any reference to the Director or the Department refer to AQCD. This has been moved to the Technical Support Document.
Attachment "B" I.F	X				This condition states that operation in Maricopa, Pima, and/or Pinal county will be subject to the additional requirements of Attachment "C", "D", and "E". This is clearly specified in the beginning of each Attachment and as a result has been reworded.
Attachment "B" I.G	X				This condition identified the equipment that would get an ATO under this general permit. This condition was also moved to the introduction of the permit.
Attachment "B" I.H.1	X				This condition is in the permit to avoid an exceedance of the NAAQS for Particulate Matter. The limit is 13.64 ton per year of PM ₁₀ .
Attachment "B" I.H.2	X				This condition is an emission limit of 90 tons per year of Nitrogen Oxide in order to avoid major the major source threshold.
Attachment "B" I.H.3		X			This condition limits the hours of operation of the equipment covered by this permit to not exceed 16 hours in a 24 hour period.
Attachment "B" I.I.1			X		This table show how many hours the I.C. engine can operate based on it's horsepower inside Maricopa County. These numbers are based on AP 42 emission factors. This condition has been removed and replaced with a condition that limits the source to operating the I.C. engine the amount of hours listed on the ATO. This allows the source to used more representative emission factors.
Attachment "B" I.I.2			X		This condition takes into account the combined horsepower of more than one I.C engine. This condition is also removed as a result of the decision made in condition I.I. of Attachment "B".
Attachment "B" I.I.3			X		This condition identifies the BACT conditions in Maricopa County. This condition was removed during the Reopening in 2004.

Crushing and Screening General Permit, References	Determination				Comments
	Revise	Keep	Delete	Stream-line	
Attachment “B” I.I.4			X		This condition allows the Permittee to submit a certification showing that the I.C. engine will not operate in Maricopa County and or operate using electrical power. This condition was removed.
Attachment “B” I.J.1		X			The Permittee will keep records of operating hours of the equipment covered by this permit.
Attachment “B” I.J.2		X			The Permittee will maintain a rolling 24 hour total of the hours of operation.
Attachment “B” I.J.3			X		While in Maricopa County the Permittee will maintain all earthmoving permits on site. This is being removed.
Attachment “B” I.J.4			X		While operating in Maricopa County the Permittee will keep copies of all dust control plans. This condition was moved to the Maricopa County section.
Attachment “B” I.J.5	X				This condition requires the Permittee to maintain records of the total daily production and daily average hourly production rate of aggregate processed.
Attachment “B” II.A			X		This condition states that if a source wants to apply for a general permit or ATO that they need to fill out an application. This condition is being remove because it is redundant.
Attachment “B” II.B			X		This condition specifies what rental companies can do to abide by the limitation of the general permit and still maximize the amount of equipment cover under the specific general permits.
Attachment “B” II.C	X				This condition requires the Permittee to submit and agree to operate in accordance with a compliance plan which includes a O&M plan.
Attachment “B” II.D.1			X		The Conditions under Section II.D of Attachment “B” cover the jurisdiction requirements for Maricopa, Pima, and Pinal counties.
Attachment “B” II.D.2.a			X		The Conditions under Section II.D of Attachment “B” cover the jurisdiction requirements for Maricopa, Pima, and Pinal counties.
Attachment “B” II.D.2.b			X		The Conditions under Section II.D of Attachment “B” cover the jurisdiction requirements for Maricopa, Pima, and Pinal counties.

Crushing and Screening General Permit, References	Determination				Comments
	Revise	Keep	Delete	Stream-line	
Attachment “B” II.D.2.c			X		The Conditions under Section II.D of Attachment “B” cover the jurisdiction requirements for Maricopa, Pima, and Pinal counties.
Attachment “B” II.D.2.c(1)			X		The Conditions under Section II.D of Attachment “B” cover the jurisdiction requirements for Maricopa, Pima, and Pinal counties.
Attachment “B” II.D.2.c(2)			X		The Conditions under Section II.D of Attachment “B” cover the jurisdiction requirements for Maricopa, Pima, and Pinal counties.
Attachment “B” III.A.1		X			<u>Crushing and Screening Facility Requirements, Applicability</u> – This condition specifies the gatekeepers for an NSPS source.
Attachment “B” III.A.2		X			<u>Crushing and Screening Facility Requirements, Applicability</u> – This condition specifies the gatekeepers for equipment that is not NSPS.
Attachment “B” III.B			X		<u>Crushing and Screening Facility Requirements, Definitions</u> - These conditions identify the definitions of “Capacity” and “Portable”. These definitions are being removed.
Attachment “B” III.C.1.a		X			<u>Crushing and Screening Facility Requirements, NSPS Source Requirements-Particulate Matter Emissions</u> – This condition is specific for screening, conveyor operations, and fine ore storage, and limits the Permittee to 10% opacity standard for process fugitives.
Attachment “B” III.C.1.b		X			<u>Crushing and Screening Facility Requirements, NSPS Source Requirements-Particulate Matter Emissions</u> – This condition is specific for crushers, and limits the Permittee to 15% opacity standard for process fugitives.
Attachment “B” III.C.1.c		X			<u>Crushing and Screening Facility Requirements, NSPS Source Requirements-Particulate Matter Emissions</u> – This condition is specific for truck/railcar loading or bagging, and limits the Permittee to 10% opacity standard for process fugitives.
Attachment “B” III.C.1.d(1)		X			<u>Crushing and Screening Facility Requirements, NSPS Source Requirements-Particulate Matter Emissions</u> – This condition is specific for operations in enclosed buildings, the building standards are no visible emissions except form vents.

Crushing and Screening General Permit, References	Determination				Comments
	Revise	Keep	Delete	Stream-line	
Attachment “B” III.C.1.d(2)		X			<u>Crushing and Screening Facility Requirements</u> , NSPS Source Requirements- Particulate Matter Emissions – This condition is specific for operations in enclosed buildings, the building standards are no gases exiting a vent containing PM greater than 0.05 grams per dry standard cubic meter and an opacity of no greater than 7 percent..
Attachment “B” III.C.2.a			X		<u>Crushing and Screening Facility Requirements</u> , NSPS Source Requirements- <u>Initial Compliance Testing for NSPS Affected Facilities</u> – This condition states that for all opacity testing that the Permittee must do an EPA Reference Method 9 on all equipment subject to the NSPS (40 CFR 60.11(d). This is covered by Condition XXI of Attachment “A”, which covers Subpart A of the NSPS, and therefore this condition was removed.
Attachment “B” III.C.2.b		X			<u>Crushing and Screening Facility Requirements</u> , NSPS Source Requirements- <u>Initial Compliance Testing for NSPS Affected Facilities</u> – This condition states that all opacity observations will be done within 60 days of achieving the maximum production rate and no later than 180 days of startup.
Attachment “B” III.D.1.a		X			<u>Crushing and Screening Facility Requirements</u> , <u>Notification Requirements for NSPS Sources</u> - For all new facilities written notification of the date construction or reconstruction of the facility started.
Attachment “B” III.D.1.b		X			<u>Crushing and Screening Facility Requirements</u> , <u>Notification Requirements for NSPS Sources</u> - For all new facilities written notification of the anticipated date of initial startup.
Attachment “B” III.D.1.c		X			<u>Crushing and Screening Facility Requirements</u> , <u>Notification Requirements for NSPS Sources</u> - For all new facilities written notification of the actual date of initial startup.
Attachment “B” III.D.2.a		X			<u>Crushing and Screening Facility Requirements</u> , <u>Notification Requirements for NSPS Sources</u> - For all facilities subject to the NSPS, written notification of any physical or operational change that may increase the emissions rate.

Crushing and Screening General Permit, References	Determination				Comments
	Revise	Keep	Delete	Stream-line	
Attachment “B” III.D.2.b		X			<u>Crushing and Screening Facility Requirements, Notification Requirements for NSPS Sources</u> - For all facilities subject to the NSPS, written notification describing the nature of the changes and must be submitted within 60 days.
Attachment “B” III.E.1.a		X			<u>Crushing and Screening Facility Requirements, Non-NSPS Source Requirements, Particulate Matter Emissions</u> . – This condition limits the Permittee not to emit any particulate matter greater than the Process weight rate equation calculates, based on the throughput of the equipment.
Attachment “B” III.E.1.b.		X			<u>Crushing and Screening Facility Requirements, Non-NSPS Source Requirements, Particulate Matter Emissions</u> . – This condition limits the Permittee not to emit any particulate matter greater than the Process weight rate equation calculates, based on the throughput of the equipment.
Attachment “B” III.E.2	X				<u>Crushing and Screening Facility Requirements, Non-NSPS Source Requirements</u> - This condition limits the source to 40 percent opacity for non-NSPS equipment. This Condition was revised to reflect current changes to the opacity rule.
Attachment “B” III.F.1.a		X			<u>Crushing and Screening Facility Requirements, Air Pollution Control Requirements – Spray Bars</u> - This condition is a Material Permit condition that requires the source to use water spray bars on crushers and Screens.
Attachment “B” III.F.1.b		X			<u>Crushing and Screening Facility Requirements, Air Pollution Control Requirements</u> - This condition states that the spray bars shall be utilized in accordance with EPA control measures.
Attachment “B” III.F.2.a(1)		X			<u>Crushing and Screening Facility Requirements, Air Pollution Control Requirements</u> - Wet Scrubber Monitoring – If the Permittee has a wet scrubber installed and is subject to NSPS conditions then the Permittee must install a monitoring device that measures pressure loss.

Crushing and Screening General Permit, References	Determination				Comments
	Revise	Keep	Delete	Stream-line	
Attachment "B" III.F.2.a(2)		X			<u>Crushing and Screening Facility Requirements, Air Pollution Control Requirements</u> - Wet Scrubber Monitoring – If the Permittee has a wet scrubber installed and is subject to NSPS conditions then the Permittee must install a monitoring device that measures liquid flow rate.
Attachment "B" III.F.2.b(1)		X			<u>Crushing and Screening Facility Requirements, Air Pollution Control Requirements</u> - Periodic Wet Scrubber Monitoring – This condition requires the Permittee to operate the wet scrubber in a manner that the pressure differential and the liquid flow rate is within 30% of the most recent performance test.
Attachment "B" III.F.2.b(2)		X			<u>Crushing and Screening Facility Requirements, Air Pollution Control Requirements</u> - Periodic Wet Scrubber Monitoring – This condition requires the Permittee make repairs to the equipment if the parameters mentioned above exceed 30%.
Attachment "B" III.G.1	X				<u>Crushing and Screening Facility Requirements, Testing Requirements</u> - This condition requires the Permittee to make quarterly Method 9 observations on the crushing and screening facility. This condition has been modified to be done on a monthly basis instead of quarterly.
Attachment "B" III.G.2	X				<u>Crushing and Screening Facility Requirements, Testing Requirements</u> - This condition requires the Permittee to make quarterly Method 22 observations on all fugitive emissions from the crushing and screening facility. This condition has been modified to be done on a monthly basis instead of quarterly.
Attachment "B" III.H.1		X			<u>Crushing and Screening Facility Requirements, Maintenance, Monitoring, and Recordkeeping Requirements</u> - Periodic Monitoring Requirements – This condition requires the Permittee to install a monitoring device which would monitor the daily process weight of sand, gravel or crushed stone produced.

Crushing and Screening General Permit, References	Determination				Comments
	Revise	Keep	Delete	Stream-line	
Attachment “B” III.H.2		X			<u>Crushing and Screening Facility Requirements, Maintenance, Monitoring, and Recordkeeping</u> Requirements- Recordkeeping Requirements – This condition requires the Permittee to maintain records of the daily process weight of sand, gravel or crushed stone.
Attachment “B” IV		X			<u>Auxiliary Lime Silos, Particulate Matter Emissions</u> – The conditions covered by the Auxiliary lime silo section of this general permit are from R18-2-730 (Standards of Performance for Unclassified Sources). It has been the Departments position that the lime silos are actually part of the Crushing and Screening Facility therefore they are covered under R18-2-722 (Standards of Performance for existing Gravel or Crushed Stone Processing Plants.). This result in lime silos being covered under the crushing and screening conditions in the renewal permits. These conditions were removed.
Attachment “B” V.A.1	X				<u>Internal Combustion Engines, Applicability</u> – This condition states that this section applies to all internal combustion engines that are not defined as non-road engines. This condition has been revised to state that the engine must be determined by the Director to be a Non Road Engine.
Attachment “B” V.A.2			X		<u>Internal Combustion Engines, Applicability</u> – This condition states that until the Department confirms the non-road engine determination that the engines will have comply with the conditions in this section. This condition has been removed because it is redundant and self explanatory.
Attachment “B” V.B.1		X			<u>Internal Combustion Engines, Emissions Limitations and Standards</u> - Emission Limitations and Standards – This condition requires the Permittee to not emit particulate matter into the atmosphere in excess of the amount calculated by the equation stated in this condition. The equation is based on the heat input of the internal combustion engine, in MMBtu/hr.
Attachment “B” V.B.2		X			<u>Internal Combustion Engines, Emissions Limitations and Standards</u> - This condition requires the Permittee not to emit smoke with an opacity greater than 40 percent.

Crushing and Screening General Permit, References	Determination				Comments
	Revise	Keep	Delete	Stream-line	
Attachment “B” V.C.1	X				<u>Internal Combustion Engines, Maintenance Requirements</u> - This condition requires the Permittee to operate and maintain all internal combustion engines in accordance with manufactures specifications. This condition was modified to include all equipment and moved to the facility wide section of the permit.
Attachment “B” V.C.2	X				<u>Internal Combustion Engines, Maintenance Requirements</u> - This condition requires the Permittee to keep onsite records of maintenance performed on all internal combustion engines. This condition was modified to include all equipment and moved to the facility wide section of the permit.
Attachment “B” V.D.1.a		X			<u>Internal Combustion Engines, Fuel Limitations</u> - Permitted Fuel and Requirements – This condition requires the Permittee to only burn natural gas, gasoline, LPG or diesel fuel in the internal combustion engines.
Attachment “B” V.D.1.b		X			<u>Internal Combustion Engines, Fuel Limitations</u> - Permitted Fuel and Requirements – This condition requires the Permittee to not emit more than 1.0 lb of sulfur dioxide per MMBtu of heat input. Also the Permittee can not use high sulfur fuel.
Attachment “B” V.D.2.a		X			<u>Internal Combustion Engines, Fuel Limitations</u> - Recordkeeping and Reporting Requirements – This condition requires the Permittee to maintain onsite records of the fuel supplier certification that verifies the sulfur content of the fuel oil.
Attachment “B” V.D.2.b		X			<u>Internal Combustion Engines, Fuel Limitations</u> - This condition requires the Permittee to report any daily periods during which the sulfur content of the fuel exceeds 0.8 percent.
Attachment “B” VI.A.1.a		X			<u>Non-Point Source Requirements, Prevention of Excessive Non-Point Source Emissions</u> – Open Ares, Roadways and Streets, Storage Piles, and Material Handling – This condition requires the Permittee to use approved dust suppressants on open areas during construction operations.

Crushing and Screening General Permit, References	Determination				Comments
	Revise	Keep	Delete	Stream-line	
Attachment “B” VI.A.1.b		X			<u>Non-Point Source Requirements, Prevention of Excessive Non-Point Source Emissions</u> – Open Ares, Roadways and Streets, Storage Piles, and Material Handling – This condition requires the Permittee to use approved dust suppressants on driveways, parking areas, or vacant lots.
Attachment “B” VI.A.1.c		X			<u>Non-Point Source Requirements, Prevention of Excessive Non-Point Source Emissions</u> – Open Ares, Roadways and Streets, Storage Piles, and Material Handling – This condition requires the Permittee to use approved dust suppressants on roadways during construction operations.
Attachment “B” VI.A.1.d		X			<u>Non-Point Source Requirements, Prevention of Excessive Non-Point Source Emissions</u> – Open Ares, Roadways and Streets, Storage Piles, and Material Handling – This condition requires the Permittee to use approved dust suppressants when transporting materials.
Attachment “B” VI.A.1.e		X			<u>Non-Point Source Requirements, Prevention of Excessive Non-Point Source Emissions</u> – Open Ares, Roadways and Streets, Storage Piles, and Material Handling – This condition requires the Permittee to use spray bars, hoods, and wetting agents to cover all crushing and screening operations.
Attachment “B” VI.A.1.f		X			<u>Non-Point Source Requirements, Prevention of Excessive Non-Point Source Emissions</u> – Open Ares, Roadways and Streets, Storage Piles, and Material Handling – This condition requires the Permittee to use adequate cover of stockpiles.
Attachment “B” VI.A.1.g		X			<u>Non-Point Source Requirements, Prevention of Excessive Non-Point Source Emissions</u> – Open Ares, Roadways and Streets, Storage Piles, and Material Handling – This condition requires the Permittee to operate the stacking and reclaiming to minimize the fall of materials.

Crushing and Screening General Permit, References	Determination				Comments
	Revise	Keep	Delete	Stream-line	
Attachment “B” VI.A.1.h		X			<u>Non-Point Source Requirements, Prevention of Excessive Non-Point Source Emissions</u> – Open Ares, Roadways and Streets, Storage Piles, and Material Handling – This condition requires the Permittee to use approved dust suppressants before cleaning of site or roadways. This condition has been moved because it applies to mobile source and is covered in Condition IX.B.1.c of Attachment “B” of the renewal permit.
Attachment “B” VI.A.1.i		X			<u>Non-Point Source Requirements, Prevention of Excessive Non-Point Source Emissions</u> – Open Ares, Roadways and Streets, Storage Piles, and Material Handling – This condition requires the Permittee to use any other methods proposed by the Department.
Attachment “B” VI.A.2			X		<u>Non-Point Source Requirements, Prevention of Excessive Non-Point Source Emissions – Open Burning</u> – This condition requires the Permittee to no do any open burning unless an open burn permit has been issued. This condition has been removed because this requirement does not apply to this facility.
Attachment “B” VI.A.3.a		X			<u>Non-Point Source Requirements, Prevention of Excessive Non-Point Source Emissions – Recordkeeping Requirements</u> – This condition requires the Permittee to maintain records of the dates the events that are specified above occur.
Attachment “B” VI.A.3.b			X		<u>Non-Point Source Requirements, Prevention of Excessive Non-Point Source Emissions – Recordkeeping Requirements</u> – This condition requires the Permittee to maintain copies of all open burn permits on file. This condition has been removed since this same requirement is listed in Condition XII. B of Attachment “A”.
Attachment “B” VI.A.3.c			X		<u>Non-Point Source Requirements, Prevention of Excessive Non-Point Source Emissions – Recordkeeping Requirements</u> – This condition requires the Permittee to maintain all records in either electronic format or indelible inks. This condition has been removed since this same requirements is listed in Condition XII.C of Attachment “A”.

Crushing and Screening General Permit, References	Determination				Comments
	Revise	Keep	Delete	Stream-line	
Attachment “B” VI.B.1		X			<u>Non-Point Source Requirements, Control of Non-Point Source Emissions</u> – Opacity Limitations and Testing – This condition requires the Permittee to not cause to be emitted into the air any emissions from non-point sources that exhibit an opacity greater than 40%.
Attachment “B” VI.B.2			X		<u>Non-Point Source Requirements, Control of Non-Point Source Emissions</u> – Air Pollution Control Requirements – This condition requires the Permittee to control visible emissions using water or equivalent to minimize visible emissions from roadways. This condition was removed because this is already stated in Conditions VI.A.1.
Attachment “B” VI.B.3.a	X				<u>Non-Point Source Requirements, Control of Non-Point Source Emissions</u> – Opacity Monitoring – This condition requires the Permittee to have a certified EPA Reference Method 9 observer conduct a quarterly visual survey of all visible emissions from non-point source, and keep appropriate records. This condition has been modified to stay consistent recent policy of conducting monthly monitoring instead of quarterly.
Attachment “B” VI.B.3.b		X			<u>Non-Point Source Requirements, Control of Non-Point Source Emissions</u> – Opacity Monitoring – If the above observation shows a plume that is greater than 40% opacity then the observer will conduct a standard six minute Method 9 observation on the plume.
Attachment “B” VI.B.3.c.i		X			<u>Non-Point Source Requirements, Control of Non-Point Source Emissions</u> – Opacity Monitoring – If the Method 9 reading shows an opacity less than 40% than the Permittee shall record the location, date , and the time of the observation.
Attachment “B” VI.B.3.c.ii		X			<u>Non-Point Source Requirements, Control of Non-Point Source Emissions</u> – Opacity Monitoring – If the Method 9 reading shows an opacity less than 40% than the Permittee shall record the result of the Method 9 reading.
Attachment “B” VI.B.3.d.i		X			<u>Non-Point Source Requirements, Control of Non-Point Source Emissions</u> – Opacity Monitoring – If the Method 9 reading shows an opacity greater than 40% than the Permittee shall adjust the controls or equipment to reduce the opacity below 40%..

Crushing and Screening General Permit, References	Determination				Comments
	Revise	Keep	Delete	Stream-line	
Attachment "B" VI.B.3.d.ii		X			<u>Non-Point Source Requirements, Control of Non-Point Source Emissions</u> – Opacity Monitoring – If the Method 9 reading shows an opacity less than 40% than the Permittee shall report it as an excess emission.
Attachment "B" VII.A.1			X		<u>Standard of Performance for Abrasive Blasting, Particulate Matter Emissions</u> – The conditions that are described under the Abrasive Blasting section of the permit have been removed because these requirements do not apply to this facility.
Attachment "B" VII.A.2			X		<u>Standard of Performance for Abrasive Blasting, Particulate Matter Emissions</u> The conditions that are described under the Abrasive Blasting section of the permit have been removed because these requirements do not apply to this facility.
Attachment "B" VII.B			X		<u>Standard of Performance for Abrasive Blasting, Recordkeeping Requirements</u> The conditions that are described under the Abrasive Blasting section of the permit have been removed because these requirements do not apply to this facility.
Attachment "B" VIII.A			X		<u>Standard of Performance for Spray Painting Operations, Visible Emissions</u> - The conditions that are described under the Spray Painting section of the permit have been removed because these requirements do not apply to this facility.
Attachment "B" VIII.B			X		<u>Standard of Performance for Spray Painting Operations, Volatile Organic Compounds Emissions</u> The conditions that are described under the Spray Painting section of the permit have been removed because these requirements do not apply to this facility.
Attachment "B" VIII.C			X		<u>Standard of Performance for Spray Painting Operations, Monitoring and Recordkeeping Requirements</u> The conditions that are described under the Spray Painting section of the permit have been removed because these requirements do not apply to this facility.
Attachment "B" IX.A			X		<u>Standards of Performance for Petroleum Liquid Storage Vessels, Control Device Standards</u> The conditions that are described under the Petroleum Liquid Storage Vessels section of the permit have been removed because these requirements do not apply to this facility.

Crushing and Screening General Permit, References	Determination				Comments
	Revise	Keep	Delete	Stream-line	
Attachment "B" IX.B			X		<u>Standards of Performance for Petroleum Liquid Storage Vessels, Recordkeeping Requirements</u> The conditions that are described under the Petroleum Liquid Storage Vessels section of the permit have been removed because these requirements do not apply to this facility.
Attachment "B" X.A		X			<u>Conditions Specific to a Portable Source, Equipment Identification</u> This condition requires the Permittee to have the serial number or the equipment identification number etched or stenciled on all equipment.
Attachment "B" X.B.1		X			<u>Conditions Specific to a Portable Source, Move Notice</u> This condition requires the Permittee of the owner the option of moving equipment from location to location if the department is notified within 10 working days of the move. The notification shall have a description of all equipment that is being moved.
Attachment "B" X.B.2		X			<u>Conditions Specific to a Portable Source, Move Notice</u> This condition requires the Permittee of the owner the option of moving equipment from location to location if the department is notified within 10 working days of the move. The notification shall have the address and description of the present location of the equipment..
Attachment "B" X.B.3		X			<u>Conditions Specific to a Portable Source, Move Notice</u> This condition requires the Permittee of the owner the option of moving equipment from location to location if the department is notified within 10 working days of the move. The notification shall have the address and description of the location to which the equipment is being moved to.
Attachment "B" X.B.4		X			<u>Conditions Specific to a Portable Source, Move Notice</u> This condition requires the Permittee of the owner the option of moving equipment from location to location if the department is notified within 10 working days of the move. The notification shall have the date on which the equipment is to be moved.

Crushing and Screening General Permit, References	Determination				Comments
	Revise	Keep	Delete	Stream-line	
Attachment "B" X.B.5		X			<u>Conditions Specific to a Portable Source, Move Notice</u> This condition requires the Permittee of the owner the option of moving equipment from location to location if the department is notified within 10 working days of the move. The notification shall have the date on which operation of the equipment will begin at the new location.
Attachment "B" X.B.6		X			<u>Conditions Specific to a Portable Source, Move Notice</u> This condition requires the Permittee of the owner the option of moving equipment from location to location if the department is notified within 10 working days of the move. The notification shall have a description of the equipment that will be transferred to the new location, including the ATO number(s).
Attachment "B" X.C.1	X				<u>Conditions Specific to a Portable Source, Dust Control Plan Submission</u> This condition requires the Permittee to submit to the Department all Dust Control Plans along with move notices when moving into Maricopa County. This condition was moved to the Attachment "C".
Attachment "B" X.C.2	X				<u>Conditions Specific to a Portable Source, Dust Control Plan Submission</u> This condition requires the Permittee to submit to the Department a Dust Control Plan for any site located within Maricopa County. This condition was moved to Attachment "C".
Attachment "B" X.C.3	X				<u>Conditions Specific to a Portable Source, Dust Control Plan Submission</u> This condition requires the Permittee have contained in the Dust Control Plan condition that meet Rule 310 of the Maricopa County Rules. This condition was moved to attachment "C".
Attachment "B" X.C.4	X				<u>Conditions Specific to a Portable Source, Dust Control Plan Submission</u> – This condition states that all Dust Control Plans are deemed approved after 10 days if a determination has not been made by the department. This condition was moved to attachment "C".
Attachment "B" X.D		X			<u>Conditions Specific to a Portable Source, Renting or Leasing Permitted Equipment</u> – This condition states that if the equipment is rented or leased then the renter and owner are held responsible to meet the requirements of the permit.

Crushing and Screening General Permit, References	Determination				Comments
	Revise	Keep	Delete	Stream-line	
Attachment "B" X.E		X			<u>Conditions Specific to a Portable Source, Portable Source Operating Solely in One County</u> This condition state that if the equipment is solely operated in a county that has an Air Pollution Program then the owner shall get a permit from that county..
Attachment "C" I			X		<u>Maricopa County Requirements for Abrasive Blasting (312)</u> The conditions that are described under the Abrasive Blasting section of the permit have been removed because these requirements do not apply to this facility.
Attachment "C" II			X		<u>Maricopa County Requirements for Vehicle Refinishing</u> – The conditions that are described under the Vehicle Refinishing section of the permit have been removed because these requirements do not apply to this facility.
Attachment "C" III			X		<u>Maricopa County Requirements for Vehicle Refinishing</u> – The conditions that are described under the Vehicle Refinishing section of the permit have been removed because these requirements do not apply to this facility.
Attachment "C" IV			X		<u>Maricopa County Requirements for New Sources and Modifications to Existing Sources – Best Available Control Technology (BACT)</u> – This Condition was removed during the Reopening Process in 2004.
Attachment "C" V			X		<u>Maricopa County Requirements for New Sources and Modifications to Existing Sources – Reasonably Available Control Technology (RACT)</u> This Condition was removed during the Reopening Process in 2004.
Attachment "C" VI			X		<u>Maricopa County Requirements for Dust Control</u> -- This condition was removed and referred to by reference in the permit.
Attachment "C" VII			X		<u>Appendix C – Visual Determination of Opacity of Emissions From Unpaved Roads, Unpaved Haul/Access Roads, and Unpaved Parling Lots on Active Work Sites</u> - This condition was removed and referred to by reference in the permit.

Crushing and Screening General Permit, References	Determination				Comments
	Revise	Keep	Delete	Stream-line	
Attachment "C" VIII			X		<u>Maricopa County Requirements for Gasoline Dispensing Operation</u> The conditions that are described under the Gasoline Dispenser Operation section of the permit have been removed because these requirements do not apply to this facility.
Attachment "C" IX			X		<u>Maricopa County Requirements for Surface Coating Operations</u> - The conditions that are described under the Surface Coating section of the permit have been removed because these requirements do not apply to this facility.
Attachment "C" Maricopa County X				X	<u>Requirements For Portable Sources</u> The conditions that are described under the Portable Sources Section of the Permit are covered in Attachment "A" and "B", therefore these conditions have been removed form Attachment "C".
Attachment "C" (1)(A)		X			<u>Maricopa County Requirements for Rock Crushing Operation</u> – Compliance with Opacity Requirements – This condition requires the Permittee not to discharge into the atmosphere stack emissions greater than 7% or emissions containing more than 0.02 grains per dry standard cubic foot of particulate matter.
Attachment "C" (1)(B)		X			<u>Maricopa County Requirements for Rock Crushing Operation</u> – Compliance with Opacity Requirements – This condition requires the Permittee not to discharge into the atmosphere fugitive dust emissions from any transfer point on a conveyor system greater than 7 % opacity.
Attachment "C" (1)(C)		X			<u>Maricopa County Requirements for Rock Crushing Operation</u> – Compliance with Opacity Requirements – This condition requires the Permittee not to discharge into the atmosphere fugitive dust emissions from crushers greater than 15% opacity.
Attachment "C" (1)(D)	X				<u>Maricopa County Requirements for Rock Crushing Operation</u> – Compliance with Opacity Requirements – This condition requires the Permittee not to discharge into the atmosphere fugitive dust emissions from screening operations, feed hoppers or crushers greater than 10% opacity.

Crushing and Screening General Permit, References	Determination				Comments
	Revise	Keep	Delete	Stream-line	
Attachment "C" (1)(E)		X			<u>Maricopa County Requirements for Rock Crushing Operation</u> – Compliance with Opacity Requirements – This condition requires the Permittee not to discharge into the atmosphere fugitive dust emissions from any other affected operation greater than 20% opacity.
Attachment "C" (2)		X			<u>Maricopa County Requirements for Rock Crushing Operation</u> – Operations and Maintenance (O&M) Plan – This condition requires the Permittee to submit an O&M plan for any emission control systems.
Attachment "C" (3)		X			<u>Maricopa County Requirements for Rock Crushing Operation</u> – Control Device Parameters – This condition requires the Permittee to operate and maintain the control equipment in accordance with the O&M plan mentioned above.
Attachment "C" (4)(A)		X			<u>Maricopa County Requirements for Rock Crushing Operation</u> – Record Keeping – This condition requires the Permittee to keep daily records of the hours of operation.
Attachment "C" (4)(B)		X			<u>Maricopa County Requirements for Rock Crushing Operation</u> – Record Keeping – This condition requires the Permittee to keep daily records of the throughput of raw materials processed in the plant.
Attachment "C" (4)(C)		X			<u>Maricopa County Requirements for Rock Crushing Operation</u> – Record Keeping – This condition requires the Permittee to keep daily records of the amount of each raw material delivered to the plant.
Attachment "C" (4)(D)		X			<u>Maricopa County Requirements for Rock Crushing Operation</u> – Record Keeping – This condition requires the Permittee to keep daily records of water used to control fugitive dust emissions from process equipment.
Attachment "C" (4)(E)		X			<u>Maricopa County Requirements for Rock Crushing Operation</u> – Record Keeping – This condition requires the Permittee to keep daily records of the parameters specified in the O&M plan.
Attachment "C"			X		<u>Maricopa County Requirements for Solvent Cleaning Operations</u> The conditions that are described under the Solvent Cleaning Operation section of the permit have been removed because these requirements do not apply to this facility.

Crushing and Screening General Permit, References	Determination				Comments
	Revise	Keep	Delete	Stream-line	
Attachment "D" I.A		X			<u>Pima County - Crushing and Screening Facility Requirements</u> – Applicability - This condition states the equipment the will be covered by this section of the permit.
Attachment "D" I.B.1.a		X			<u>Pima County - Crushing and Screening Facility Requirements</u> – Particulate Matter Emissions – This condition requires the Permittee to not emit into the atmosphere particulate matter emissions from gravel or crushed stone processing plants greater than the listed process weight rate equation allows for a process weight rate of 60.000 pounds per hour or less.
Attachment "D" I.B.1.b		X			<u>Pima County - Crushing and Screening Facility Requirements</u> – Particulate Matter Emissions – This condition requires the Permittee to not emit into the atmosphere particulate matter emissions from gravel or crushed stone processing plants greater than the listed process weight rate equation allows for a process weight rate of 60.000 pounds per hour or greater.
Attachment "D" I.B.2		X			<u>Pima County - Crushing and Screening Facility Requirements</u> – Particulate Matter Emissions – This condition requires the Permittee to limit the opacity to what is listed in Table 4.
Attachment "D" II.			X		<u>Pima County - Auxiliary Lime Silos</u> – Particulate Matter Emissions - The conditions covered by the Auxiliary lime silo section of this general permit are from P.C.C. 17.16.430.A.1. It has been the Departments position that the lime silos are actually part of the Crushing and Screening Facility therefore they are covered under P.C.C. 17.16.370.A. This results in lime silos being covered under the crushing and screening conditions in the renewal permits. These conditions were removed.
Attachment "D" III.A.		X			<u>Pima County - Non-Point Source Requirements</u> – Fugitive Dust Producing Activities –This condition requires the Permittee to control fugitive dust emissions unpaved roads and landscaping by using water or a dust suppressant.

Crushing and Screening General Permit, References	Determination				Comments
	Revise	Keep	Delete	Stream-line	
Attachment “D” III.B		X			<u>Pima County - Non-Point Source Requirements</u> – Fugitive Dust Emissions Standards for Motor Vehicle Operation – This condition requires the Permittee to use dust suppressants on open lots to prevent air borne emission of particulate matter form vehicle travel.
Attachment “D” III.C		X			<u>Pima County - Non-Point Source Requirements</u> – Vacant Lots and Open Spaces – The condition contain in this section require the Permittee to properly control vacant lots and open spaces .
Attachment “D” III.D		X			<u>Pima County - Non-Point Source Requirements</u> – Roads and Streets – The conditions contained in this section require the Permittee to minimize dust using dust suppressants or paving for roads and streets.
Attachment “D” III.E		X			<u>Pima County - Non-Point Source Requirements</u> – Particulate Materials- the conditions contained in this section require the Permittee to control air borne particulate matter emissions from crushing, screening handling, transportation or conveying of material without taking reasonable precaution.
Attachment “D” IV.A.1		X			<u>Pima County - Other Specific Requirements</u> – Opacity Limitations – This condition requires the Permittee to have an EPA Reference Method 9 observer.
Attachment “D” IV.A.2		X			<u>Pima County - Other Specific Requirements</u> – Opacity Limitations - The condition states the process of taking a EPA Method 9 observation.
Attachment “D” IV.A.3		X			<u>Pima County - Other Specific Requirements</u> – Opacity Limitations – This condition requires the Permittee not use air or other gaseous diluents for achieving compliance.
Attachment “D” IV.A.4		X			<u>Pima County - Other Specific Requirements</u> – Opacity Limitations – This condition states that if the only reason for not compliance is uncombined water then this section does not apply.
Attachment “D” Table 4:		X			<u>Pima County – Emission-Discharge Opacity Standards</u> – This table shows the type of source the instantaneous Opacity Measurement and the Maximum Allowable Average Opacity %.

Crushing and Screening General Permit, References	Determination				Comments
	Revise	Keep	Delete	Stream-line	
Attachment “D” IV.B.1		X			<u>Pima County - Other Specific Requirements</u> – Visibility Limiting Standards - This condition requires the Permittee to take reasonable precaution to prevent air borne dust emissions.
Attachment “D” IV.B.2		X			<u>Pima County - Other Specific Requirements</u> – Visibility Limiting Standards – Visibility Limiting Standards – This condition requires the Permittee to limit the opacity of non-point source to 40% using EPA Reference Method 9.
Attachment “D” IV.B.3		X			<u>Pima County - Other Specific Requirements</u> – Visibility Limiting Standards – This condition state that open fires are not covered by this section.
Attachment “D” IV.B.4.		X			<u>Pima County - Other Specific Requirements</u> – Visibility Limiting Standards – This condition requires the Permittee to not allow diffusion of visible emission beyond the property boundary line.
Attachment “E” I.A		X			<u>Pinal County – Crushing and Screening Requirements</u> – Particulate Matter Emissions – This condition requires the Permittee to utilize spray bars to control pollution for process operations in the rock crushing industry.
Attachment “E” I.B		X			<u>Pinal County – Crushing and Screening Requirements</u> – Particulate Matter Emissions – This condition requires the Permittee to keep process material 90% wet.
Attachment “E” II.A.1		X			<u>Pinal County – Non-Point Source Requirements</u> – Particulate Matter Emissions – Control of Fugitive Dust – This condition requires the Permittee to control fugitive emission by using water or dust suppressants.
Attachment “E” II.A.2		X			<u>Pinal County – Non-Point Source Requirements</u> – Particulate Matter Emissions – Control of Fugitive Dust – This condition requires the Permittee to control fugitive emission by using water or dust suppressants.
Attachment “E” II.A.3		X			<u>Pinal County – Non-Point Source Requirements</u> – Particulate Matter Emissions – Control of Fugitive Dust – This condition requires the Permittee to control fugitive emission by using water or dust suppressants.

Crushing and Screening General Permit, References	Determination				Comments
	Revise	Keep	Delete	Stream-line	
Attachment "E" II.B.1		X			<u>Pinal County – Non-Point Source Requirements</u> – Particulate Matter Emissions – Control Equipment and Procedures-This condition requires the Permittee to control fugitive emissions from waste piles and ponds, open areas, roadways, and haul roads.
Attachment "E" II.B.2		X			<u>Pinal County – Non-Point Source Requirements</u> – Particulate Matter Emissions – Control Equipment and Procedures- This condition requires the Permittee to control fugitive emission from the transportation of materials.
Attachment "E" III			X		<u>Pinal County - Standards of Performance for Spray Painting Operations</u> - The conditions that are described under the Spray Painting Operation section of the permit have been removed because these requirements do not apply to this facility.
Attachment "E" IV			X		<u>Pinal County - Standards of Performance for Gasoline Storage Vessels</u> - The conditions that are described under the Gasoline Storage Vessel section of the permit have been removed because these requirements do not apply to this facility.
Attachment "E" V				X	<u>Pinal County – Other Specific Requirements</u> - The conditions described in this section is covered in Attachment "A" and "B", therefore this condition has been removed.
Attachment "F" Applicable Regulations			X		<u>Requirements Specifically Identified as Applicable</u> – This section of the permit has been remove because the format of the permit has changed to include a permit shield condition for each section in the renewal permit.

V. PERIODIC MONITORING (STATEWIDE)

A. Crushing and Screening Operation - NSPS

1. Opacity

The source is required to conduct a monthly EPA Reference Method 9 observation on all crushing and screening operations which include crusher operations. The source is also required to conduct a monthly EPA Reference Method 22 observation on all fugitive emissions from buildings that house any equipment.

2. Process Weight Rate

A monitoring device which can be used to determine the daily process weight of sand, gravel, or crushed stone produced, is required. The weighing device must have an accuracy of plus or minus 5%

over their operating range.

B. Crushing and Screening Operation – NON -NSPS

1. Opacity

The source is required to conduct a monthly EPA Reference Method 9 observation on all crushing and screening operations which include crusher operations. The source is also required to conduct a monthly EPA Reference Method 22 observation on all fugitive emissions from buildings that house any equipment.

2. Process Weight Rate

A monitoring device which can be used to determine the daily process weight of sand, gravel, or crushed stone produced, is required. The weighing device must have an accuracy of plus or minus 5% over their operating range

C. Internal Combustion Engines

1. Opacity

The generators or internal combustion engines are subject to a 40% opacity limitation. The Permittee will be required to conduct a monthly certified EPA Reference Method 9 observation on all internal combustion engines. The Permittee will be required to keep records of any EPA Reference Method 9 observations performed. These records will include the emission point observed, location of observer, name of observer, date and time of observation, and the results of the observation. If the observation shows a Method 9 opacity reading in excess of 40%, the Permittee will be required to initiate appropriate corrective action to reduce the opacity below the standard. The Permittee will keep a record of the corrective action performed.

2. Particulate Matter

The Permittee is required to monitor the lower heating value of the fuel being combusted in the internal combustion engines. Compliance with this requirement may be demonstrated by maintaining copy of the fuel supplier certification specifying the lower heating value.

3. Sulfur Dioxide

The Permittee is required to maintain records of daily sulfur content and lower heating value of the fuel fired in the internal combustion engines, along with a copy of the fuel supplier certification specifying the sulfur content and lower heating value.

D. Concrete Batch Plants

1. Opacity

Concrete batch plants are subject to a 40% opacity limitation when located in an attainment area until April 23, 2006, than they will be subject to a 20% opacity limitation. If the concrete batch plant is located in a non-attainment area than it is subject to a 20% opacity limitation. The Permittee will be required to conduct a monthly certified EPA Reference Method 9 observation on all process equipment. The Permittee will be required to keep records of any EPA Reference Method 9 observations performed. These records will include the emission point observed, location of observer, name of observer, date and time of observation, and the results of the observation. If the observation shows a Method 9 opacity reading in excess of the opacity limit, the Permittee will be required to initiate appropriate corrective action to reduce the opacity below the standard. The Permittee will

keep a record of the corrective action performed.

2. *Baghouses*

The Permittee is required to maintain logs of all maintenance activities performed on any baghouses. Included in these logs are the type of maintenance activity being performed, the duration of each maintenance activity, the date, start time and the end time of the activity. If the baghouse is equipped with a pressure drop measuring device than the Permittee will monitor and record twice per shift pressure drop across the baghouse.

E. Fugitive Emissions

The Permittee is required to make a monthly survey of the visible emissions from all fugitive dust sources. The Permittee is required to create a record of the date on which the survey was taken, the name of the observer, and the results of the survey.

If the Permittee finds that on an instantaneous basis the visible emissions appear to be in excess of the opacity standard, then the Permittee is required to make a six-minute Method 9 observation. If this observation indicates opacity in excess of the standard, then the Permittee is required to report it as excess emissions. In addition, the Permittee is required to adjust the process equipment or process control equipment to bring the opacity below the standard. Monitoring and recordkeeping requirements for the fugitive dust sources include a record of the date and type of activity performed, and the type of controls used.

VI. PERIODIC MONITORING (MARICOPA, PIMA, AND PINAL COUNTY)

A. Facilitywide Operation

1. *Odor Log*

The Permittee is required to maintain a log of complaints of odors detected off-site. The log will contain a description of the complaint, date and time that the complaint was received, and if given, name and phone number of the complainant. The logbook will also describe what actions were performed to investigate the complaint, the results of the investigation, and any corrective actions that were taken.

2. *Operating and Maintenance Plan*

The Permittee is required to submit an operating and maintenance plan for all control equipment located at the facility. Included in the O & M plan is that the Permittee must monitors the flow rate, the pressure drop, and any other criteria that show the control equipments is operating properly.

B. Crushing and Screening Operations

Operational

The Permittee is required to monitor the throughput of raw materials processed in the plant in tons/day, the hours of operation, the amount of each raw material delivered to the plant in tons/day, and the amount of water used to control fugitive emissions from process equipment.

C. Internal Combustion Engines

Nitrogen Oxide/Carbon Monoxide/Volatile Organic Compounds

The Permittee is required to provide a statement from the manufacturer that the engines meet the most

stringent emissions standards found in 40 CFR 89 or 90.

D. Concrete Batch Plants

Baghouses

The Permittee is required to maintain logs of all maintenance activities performed on any baghouses. Included in these logs are the type of maintenance activity being performed, the duration of each maintenance activity, the date, start time and the end time of the activity. If the baghouse is equipped with a pressure drop measuring device then the Permittee will monitor and record twice per shift pressure drop across the baghouse.

VII. TESTING REQUIREMENTS (MARICOPA PIMA, AND PINAL COUNTY)

A. Grain Loading

Particulate matter and associated moisture content will be determined using the applicable EPA Reference Methods 1 through 5, 40 CFR Part 60, Appendix A.

B. Fugitive Emissions

The Permittee shall conduct performance tests for soil stabilization and moisture content as required by the Director.

VIII. LIST OF ABBREVIATIONS

A.A.C.	Arizona Administrative Code
ADEQ	Arizona Department of Environmental Quality
ATO	Authorization to Operate
MMBtu/hr	Million British Thermal Units per Cubic Foot
CFR	Code of Federal Regulations
CO	Carbon Monoxide
EPA	Environmental Protection Agency
HAP	Hazardous Air Pollutant
lb/hr	Pound per Hour
NOV	Notice of Violation
NO _x	Nitrogen Oxides
NSPS	New Source Performance Standards
PM	Particulate Matter
PM ₁₀	Particulate Matter Nominally less than 10 Micrometers
PTE	Permanent Total Enclosure
SIP	State Implantation Plan
SO ₂	Sulfur Dioxide
VOC	Volatile Organic Compound